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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/820,130

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Shunpei Yamazaki

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NIXON PEABODY, LLP

401 9TH STREET, NW

SUITE 900

WASHINGTON, DC 20004-2128

EXAMINER

MOORE, KARLA A

ART UNIT

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1792

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/820,130	<b>Applicant(s)</b> YAMAZAKI ET AL.	
	<b>Examiner</b> KARLA MOORE	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 17-34 is/are pending in the application.
- 4a) Of the above claim(s) 4-7 and 23-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 17-22 and 29-32 is/are rejected.
- 7) ☒ Claim(s) 33 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 32 recites the limitation "said thermal expansion center of said frame".

There is insufficient antecedent basis for this limitation in the claim. Examiner has assumed the recitation was meant to read "said thermal expansion center in members of said frame", as previously recited in claim 1. Clarification and/or correction is requested.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 3, 17, 19-20, 22, 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,356,686 to Fujioka et al. in view of U.S. Patent No. 6,475,287 to Clark.

7. Regarding claims 1, 17 and 20: Fujioka et al. disclose a thin-sheet mask in Figures 3 and 5, comprising: a mask body (2) having a pattern opening; and a frame (1), wherein said mask body is fixed to said frame in a stretched state and said mask body is adhesively bonded (using adhesive 3 at 14) in a location coinciding with a line passing through a thermal expansion center in members (7) of said frame.

8. Fujioka et al. fails to teach that the apparatus can also be used in a deposition apparatus wherein a material is evaporated from a deposition source and deposited over a substrate through said opening of said mask body.

9. Clark teaches using a mask and frame apparatus for the purpose of permitting selective deposition from a deposition source situated below the mask, frame and a deposition substrate (abstract).

10. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided the mask and frame apparatus of Fujioka in a deposition apparatus for the purpose of selectively depositing onto a deposition substrate as taught by Clark.

11. With respect to claims 3, 19 and 22, said mask body is adhesively bonded to said frame with an adhesive material having heat resistance. All material have some heat resistance, even if it is low and/or minimal.

12. With respect to the specific material to be deposited (e.g. EL material), the courts have ruled that expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969).

13. With respect to claims 29-31, the substrate to be processed is not considered part of the apparatus. The claimed apparatus would be capable of processing many different types of substrates. Therefore, the limitations drawn thereto do not limit the claims. The courts have ruled that the inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)).

14. Claims 2, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka et al. and Clark as applied to claims 1, 3, 17, 19-20, 22, 29-31 above, and further in view of Japanese Patent No. 05341502A to Sekimoto et al.

15. Fujioka et al. and Clark disclose the apparatus substantially as claimed and as described above.

16. However, Fujioka et al. and Clark fail to teach the frame as having four corners with curvature.

17. Sekimoto et al. teach providing a mask frame comprising four corner with curvature for the purpose of forming a frame capable of uniformly forming an adhesive layer at the inside face without generating a film breaking at the time of sticking the frame film and without damaging the mask at the time of repairing the frame (abstract).

18. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a frame having four corners with curvature in Fujioka et al. and Clark in order to form a frame capable of uniformly forming an adhesive layer at the inside face without generating a film breaking at the time of sticking the frame film and without damaging the mask at the time of repairing the frame as taught by Sekimoto et al.

***Allowable Subject Matter***

19. Claim 32 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

20. Additionally, claims 33-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

21. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or fairly suggest a mask comprising: a mask body having a pattern opening; and a frame, wherein a material evaporated from a deposition source is deposited on a substrate through said pattern opening of said mask body, wherein said material comprises an organic compound, and wherein said mask body is fixed to said frame in a stretched state and said mask body is adhesively bonded in a location coinciding with a line passing through a thermal expansion center of said frame; and wherein said frame is supported by an arm in said location coinciding with said line passing through said thermal expansion center in said frame.

### ***Response to Arguments***

22. Applicant's arguments with respect to claims 1 and 3 have been considered but are moot in view of the new ground(s) of rejection. The anticipation rejection based on prior art reference Fujioka has been withdrawn as additional limitations have been added to the claim. The added limitations bring the claimed subject matter more closely in line with previously rejected claims 17 and 20 (and their dependent claims). Thus, in the present action all claims are rejected using the same prior art, as detailed above.

23. Applicant's arguments filed 21 February 2008, regarding claims 1, 17 and 20 (and all claims dependent thereon) have been fully considered but they are not persuasive.

24. It would have been obvious to one of ordinary skill in the art to incorporate the mask of Fujioka into the apparatus of Clark as described above. Further, inclusion of a

specific processing material (e.g. an EL material) is not considered a structural limitation therefore does not help to structurally distinguish the claimed invention over the prior art. The courts have ruled that expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969). The courts have also ruled that claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). It has also been ruled that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

25. In response to Applicant's further arguments that Applicant has recognized additional and/or different advantages with the claimed invention, it is noted that the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

26. In response to Applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the



references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, as detailed above, at least, the abstract provides motivation for combination. Further, Fujioka discloses an advantageous mask and frame structure. Clark discloses that a mask and frame structure are used in the deposition apparatus described therein. One of ordinary skill would have realized that the mask and frame structure of Fujioka could have been combined with the apparatus of Clark, where a mask and frame are necessary in order to incorporate the advantages thereof.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARLA MOORE whose telephone number is (571)272-1440. The examiner can normally be reached on Monday-Friday, 9:00 am-6:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Karla Moore/

Primary Examiner, Art Unit 1792

21 April 2008